



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/665,544      | 09/19/2003  | Kam Lun Chui         | MCHK/134/US         | 5963             |

2543 7590 07/12/2006

ALIX YALE & RISTAS LLP  
750 MAIN STREET  
SUITE 1400  
HARTFORD, CT 06103

|          |
|----------|
| EXAMINER |
|----------|

SNIDER, THERESA T

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1744

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                    |  |
|------------------------------|--------------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/665,544 | <b>Applicant(s)</b><br>CHUI ET AL. |  |
|                              | <b>Examiner</b><br>Theresa T. Snider | <b>Art Unit</b><br>1744            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-9 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/12/2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Objections***

2. Claim 4 is objected to because of the following informalities: Claim 4, line 4, 'a' should be replaced with 'an'. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3-4, 7-8 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Exemplary of such:

Claim 3, line 2, 'the float' lacks proper antecedent basis.

Claim 8, line 13, it is unclear as to which wall 'the wall' refers; the upstream wall or the outside wall of the chamber.

Claim 13, line 6, it is unclear as to which wall 'the wall' refers; the upstream wall or the outside wall of the chamber.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 9, 11 and 14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Griffiths.

Griffiths discloses a housing having a separation chamber and a collection chamber (fig. 2, #12, #40,64).

Griffiths discloses a floor unit having a suction opening (col. 3, line 65-col. 4, line 5).

Griffiths discloses a passage between the suction opening and the separation chamber (figs. 1-2, #28).

Griffiths discloses a suction source (fig. 2, #36).

Griffiths discloses controller for stopping the suction source when a level of liquid in the collection chamber rises to a predetermined level (col. 6, lines 27-52).

Griffiths discloses a protective structure to shield at least a portion of the controller (housing of #68).

With respect to claim 2, Griffiths discloses the controller including a float and a switch (col. 6, lines 35-50).

With respect to claims 9 and 14, Griffiths discloses a structure for defining a path for the stream of air along an internal perimeter of the separation chamber (col. 5, lines 26-34).

Art Unit: 1744

With respect to claim 11, Griffiths discloses an air inlet of the separation chamber defining an inlet path tangential to the path along the internal perimeter of the chamber (fig. 3, #41).

7. Claims 9 and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hamrick('325).

Hamrick('325) discloses a housing having a separation chamber and a collection chamber (fig. 5, #53,60).

Hamrick('325) discloses a floor unit having a suction opening (col. 4, line 51-54).

Hamrick('325) discloses a passage between the suction opening and the separation chamber (fig. 5, #31).

Hamrick('325) discloses a suction source (fig. 2, #36).

Hamrick('325) discloses a structure for defining a path for the stream of air along an internal perimeter of the separation chamber (col. 3, lines 68-75).

With respect to claim 11, Hamrick('325) discloses an air inlet of the separation chamber defining an inlet path tangential to the path along the internal perimeter of the chamber (col. 3, lines 68-75).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1744

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffiths as applied to claim 1 above, and further in view of Choi.

Griffiths discloses a similar vacuum cleaner however fails to disclose a float guide.

Griffiths discloses the use of 'a variety of different types of floating ball valves' (col. 6, lines 15-19). Choi discloses a vacuum cleaner having a controller with float guide constraining a float therein (fig. 1, #3,31). It would have been obvious to one of ordinary skill in the art to provide the controller of Choi in Griffiths to replace one know controller for another.

With respect to claim 7, Choi discloses the float guide is a tube with openings at a bottom and top thereof (fig. 1, #3, col. 3, lines 37-38).

Art Unit: 1744

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Griffiths.

Griffiths discloses a similar vacuum cleaner however fails to disclose a restriction.

It would have been obvious to one of ordinary skill in the art to provide a restriction in Griffiths to allow for an increase in air velocity to allow for the most effective separation.

13. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamrick('325).

Hamrick('325) discloses a similar vacuum cleaner however fails to disclose a restriction.

It would have been obvious to one of ordinary skill in the art to provide a restriction in Hamrick('325) to allow for an increase in air velocity to allow for the most effective separation.

#### ***Allowable Subject Matter***

14. Claims 4-6 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. Claim 8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

16. Claim 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jerabek, Nichols, Yang, Yung, van der Molen and Scalfani et al. disclose vacuum

Art Unit: 1744

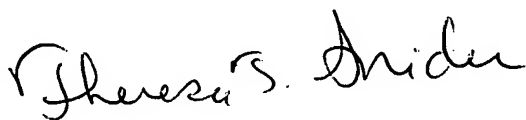
cleaners having structures for defining a path for the steam of air in a separation chamber.

Eriksson et al. and Hamrick('297)disclose vacuum cleaners having a structure for defining a path for the steam of air in a separation chamber and a level sensor. Robitaille discloses a vacuum cleaner with a float having a protective structure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Snider whose telephone number is (571) 272-1277. The examiner can normally be reached on Monday-Thursday (5:30am-2:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Theresa T. Snider  
Primary Examiner  
Art Unit 1744

7/10/2006